Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

they occur in countless numbers. Lying parallel with one another, they form compact bundles which are situated in narrow elongated cells, known as crystal cells. The raphides are very minute; in length from .01 mm. to .012 mm.; in diameter about .002 mm. They are many sided, with angles and faces poorly defined, and possess sharp ragged ends. In addition to raphides, isolated stellate crystals are also found in the fruit of Monstera.

Concerning the early developement of fibres, de Bary states that they arise by early outgrowth of a cell of the wall of the cavity (usually one layer of cells thick), which remains relatively narrow so as to form long, pointed arms. This explanation may be accepted as general, but it has not been satisfactorily proven in this special plant.

Finally, we may draw the conclusion that since the raphides are so minute, and form such a small quantity compared with the fibres, and since the action of calcium oxalate is very slight, the peculiar sensation caused by placing a piece of the outer fruit in the mouth must necessarily originate from the mechanical action of the sharp-pointed sclerenchymatous fibres, and not from any chemical action of the raphides.

Purdue University, Lafayette, Ind.

EXPLANATION OF PLATE X.—Fig 1. Fruit of Monstera deliciosa. Fig. 2. Section of fruit showing structure; *a*, endocarp or core; *b*, hexagonal segments or fruit proper; *x*, mesocarp or edible portion; *y*, exocarp. Fig. 3. Exocarp dissected under low power; *a*, fibers, *b*, raphides. Fig. 4. Fiber and raphides under high power. Fig. 5. Cross-section of "fruit proper;" *a*, cross-section of fibre. Fig. 6. Longitudinal section of "fruit proper;" *a*, crystal cell; *b*, parenchyma cell; *c*, fibre.

Our worst weeds.

BYRON D. HALSTED.

It is due to those who have already aided me in the study of the weed flora of the United States that some preliminary report be given. The first twenty-five lists which have been received contain in all 267 species, and represent 14 states, ranging from Massachusetts to California, and Wisconsin to Texas. As, in the present article, we are to deal with the worst weeds, attention will be confined to those which appeared at least five times in the lists. Of these there are 34 species, which will be enumerated below.

To those who may not have chanced to see the kind note of the editors of the GAZETTE (xiii. 327), setting forth my wishes, it may be said that the call was for at least the twenty worst weeds in any locality or territory which any one would be pleased to report upon. In nearly all instances the weeds were given their rank as to injuriousness, and from such reports the present article is made up. Following each species will be observed a fraction: the numerator indicates the number of times the species appears in the twenty-five lists, while the denominator is the sum of all the rank numbers. Thus, Agropyrum repens has the fraction $\frac{8}{31}$, which indicates that this "quack-grass" or "quick-grass" appears eight times in the twenty-five lists, and that the rank total is thirty-one, the respective ranks being 5, 1, 4, 3, 9, 2, 5, and 2. As another illustration, Chrysanthemum Leucanthemum, or "ox-eye," "ox-eye daisy," or "bull's-eye," also has eight mentions, but the sum of the rank figures, 4, 16, 17, 9, 5, 11, 6, 12, is eighty. It will be seen that the fraction following each species therefore indicates the rank of the injuriousness of each sort, as far as averages can do it in connection with the wide or limited distribution of the species. The thirty-four are as follows, arranged alphabetically:

Agropyrum repens, $\frac{8}{31}$.
Amarantus albus, $\frac{5}{75}$.
Amarantus retroflexus, $\frac{12}{107}$.
Amarantus spinosus, $\frac{5}{64}$.
Ambrosia artemesiæfolia, $\frac{17}{109}$.
Ambrosia trifida, $\frac{8}{72}$.
Arctium Lappa, $\frac{12}{157}$.
Asclepias Cornuti, $\frac{5}{43}$.
Bidens frondosa, $\frac{6}{77}$.
Brassica Sinapistrum, $\frac{5}{62}$.
Capsella Bursa-pastoris, $\frac{11}{133}$.
Cenchrus tribuloides, $\frac{8}{52}$.
Chenopodium album, $\frac{16}{155}$.
Chrysanthemum Leucanthemum, $\frac{8}{80}$.
Convolvulus sepium, $\frac{7}{87}$.
Cnicus arvensis, $\frac{7}{16}$.
Cnicus lanceolatus, $\frac{6}{78}$.
Datura Stramonium, $\frac{6}{76}$.
Erigeron annuum, $\frac{5}{50}$.
Hypericum perforatum, $\frac{5}{70}$.
Panicum Crus-galli, $\frac{6}{71}$.
Panicum sanguinale, $\frac{11}{75}$.
Portulaca oleracea, $\frac{20}{201}$.
Rumex Acetosella, $\frac{11}{91}$.
Rumex crispus, $\frac{14}{149}$.
Rumex obtusifolius, $\frac{5}{56}$.
Setaria glauca, $\frac{8}{73}$.
Setaria viridis, $\frac{5}{27}$.
Solanum Carolinense, $\frac{5}{39}$.
Solanum rostratum, $\frac{5}{47}$.
Taraxacum officinale, $\frac{5}{66}$.
Vernonia fasciculata, $\frac{6}{90}$.
Xanthium Canadense, $\frac{8}{48}$.
Xanthium stramonium, $\frac{8}{58}$.

The numerators may fairly indicate the prevalence of the weed. Thus Portulaca oleracea, the common purslane or "pusley," has the most frequent mention, namely, 20 out of the 25; while Solanum rostratum, the Texan nettle or beaked horse-nettle, is only five times reported in the list, but is a vile pest moving northward and eastward, and if not checked in its course will bring dismay to thousands of farmers who now know nothing of its pernicious habits.

The interested reader can quickly select from the table the species which are most prevalent over the whole United States, but the relative injuriousness, which is obtained by dividing the denominator by the numerator, is not so easily seen. The following list of 20 is therefore given in the order of injuriousness, beginning with the worst:

Cnicus arvensis.
Agropyrum repens.
Xanthium Canadense.
Cenchrus tribuloides.
Panicum sanguinale.
Ambrosia artemisiæfolia.
Xanthium stramonium.
Rumex Acetosella.
Amarantus retroflexus.
Ambrosia trifida.
Setaria glauca.
Chenopodium album.
Chrysanthemum Leucanthemum.
Portulaca oleracea.
Rumex crispus.
Panicum Crus-galli.
Convolvulus sepium.
Capsella Bursa-pastoris.
Cnicus lanceolatus.
Arctium Lappa.

The writer is anxious to add to the number of his reports, and will be pleased to hear not only from every state and territory in the Union, but in such numbers that the summary derived from them may furnish a basis for future calculations, if not for national legislation. Questions of eradication, quarantine and the like, come naturally after the nature of the pests has been settled upon in the broadest sense. The greater part of this work must be done by local observers who are willing to aid in arming ourselves as a nation against a vast array of active enemies to American agriculture. If any one will add to or take from the list of 34 species herein given, let him do so as a bit of public service.

New Brunswick, N. J.

Sweet Cassava (Jatropha Manihot.)

H. W. WILEY.

About the middle of March, last year, I received from Mr. R. H. Burr, of Bartow, Fla., a package of cassava roots. These roots reached the department in fine condition, being apparently as fresh as the day they were taken